annual UNE rate increases in line with the rate of expense inflation. Capital costs should be computed as levelized values over the life of plant, so that a constant UNE price remains in effect until such time as prices are negotiated again by the parties.

MR. CONWELL'S REBUTTAL OF AT&T TESTIMONY

Testimony – SWBT's cost study methodologies were developed during a time when high degrees of precision were not required. Rebuttal – SWBT has produced cost information that is sufficiently precise to set reasonable rates. In addition, SWBT has improved its cost studies by adopting new tools, more sophisticated cost models and new data sources.

Testimony – AT&T computed new capital cost factors using a lower cost of money. Rebuttal – SWBT compared its capital cost factors with the factors AT&T used. AT&T's proposed capital cost factors are substantially lower and would result in lower UNE cost estimates and rates. AT&T's capital cost factors are not valid. They are based on service lives which are too long and which would result in inadequate capital recovery. AT&T also used a lower cost of money. These two factors - longer service lives and lower cost of money - produce capital cost factors which are inadequate for SWBT to recover capital investment and earn a fair return on investment. The key changes which AT&T made is in the lives of circuit equipment, buried cable and underground cable. The lives recommended by AT&T for these key plant accounts are entirely too long and would result in inadequate rates for unbundled loops and other network elements.

Testimony – SWBT's maintenance expense factors result in double recovery of some costs. Rebuttal – The issue raised by AT&T relates to non-recurring costs of provisioning network elements which are included in the maintenance expense factors and in SWBT's non-recurring cost studies. Only the customer-initiated rearrangement and changes are represented in the non-recurring cost study, and only a portion of these are to be billed to AT&T and other competitive local exchange carriers ("CLECs"). If an adjustment is to be made to the maintenance expense factors, it should be based on only rearrangement and change expenses caused by network element provisioning. Identifying this amount is difficult. While it is "conceptually" correct to remove non-recurring, provisioning costs from the maintenance expense factor when these costs are recognized in separate non-recurring charges, it does not necessarily mean that maintenance costs are being "double-recovered." There may be circumstances in which the forward-looking, LRIC maintenance expenses for a network element are well below its current, actual maintenance expenses.

Testimony – Rather than modify SWBT's maintenance expense factors, no separate non-recurring charges should be assessed. Rebuttal – Non-recurring charges are essential for SWBT to recover the costs of processing CLEC orders for UNEs and provisioning costs. Eliminating non-recurring charges prevents SWBT from assessing CLECs non-recurring costs as they occur, thereby subsidizing their entry into local telephone service.

Testimony – AT&T indicated that the Commission previously had adopted its position that 20% of testing expenses are avoidable with resale and, therefore, a portion of testing expenses should be removed from the maintenance expense factors. Rebuttal – No adjustment to the maintenance expense factors should be

made for testing. Mr. Segura, AT&T's non-recurring cost witness, indicated such tests are necessary in SWBT's actual network, rather than the hypothetical network assumed in the AT&T cost studies. The adjustment made to remove 20% of testing expenses from maintenance expense factors is inappropriate and would understate the forward-looking costs of maintenance.

Testimony – AT&T indicates that work papers were not provided for the general purpose computer maintenance expense factor. AT&T claims that it calculated a factor which is lower than the factor calculated by SWBT. Rebuttal – SWBT's maintenance expense factor is correct. It provided work papers supporting the maintenance expense factor for general purpose computers in reply to Data Request No. 10.1, dated 1/20/98. The maintenance expense factor computed by AT&T is approximately four percentage points lower than SWBT's factor and was estimated incorrectly.

Testimony – Certain support asset costs are included in both labor rates and support asset expense factors. Rebuttal – Plant work groups, such as outside plant and central office technicians, utilize motor vehicles and are supported by garage work equipment, general purpose computers and other support assets. A specified percentage of salaries and wages is included in plant labor rates to account for *salary-related* support asset costs. When the labor rate is used to compute the cost of provisioning or other activity, support asset costs are recognized. These same salary-related support asset costs are included in the support asset expense factor, along with *plant-related* support asset costs, which are not included in the labor rates. However, any "double-counting" is insignificant.

Testimony – AT&T completely eliminated the salary-related support asset expenses from SWBT plant labor rates. Rebuttal – This approach is unjustified and inappropriate because the salary-related support asset expenses indeed are caused by labor activities and should be included in labor rates. If an adjustment is to be made, it should be to the support asset expense factor. This adjustment will have a minor effect on UNE costs.

Testimony – SWBT failed to provide adequate support materials for the power factors. Rebuttal – SWBT provided such support materials in a document titled, "Calculation of Common Equipment Factor by Account - Oklahoma - End of Year 1995." It shows the calculation of common equipment factors, also referred to as power equipment factors. This documentation covered general purpose computers.

Testimony – AT&T suggested that SWBT should have used a single, uniform building factor for central office switching and operator systems, which may require different types of construction and which may have different costs. Rebuttal – This is not a significant issue. AT&T recognizes, as SWBT does, that central office equipment of the same capacity takes less building space than in the past. However, growth in circuit equipment and other requirements have consumed space so that SWBT does not have excessive vacant space in network buildings. In this environment, the building factor provides a reasonable estimate of the forward-looking cost of buildings necessary to satisfy the total demand for building space.

Testimony – Non-network building costs should be excluded from the building factor and some allowance should be made for collocation rents. Rebuttal – If non-network buildings are excluded from the building factor, their capital costs and operating expenses should be added to the support asset expenses. AT&T agrees that leaving them in the building factor is a more practical solution. Inadequate data exist to estimate the impact of removing a portion of building investment for collocation space. The adjustment would not materially affect the building factor.

Testimony – Investment in radio equipment should be included in the building factor calculation. Rebuttal – Unlike switching systems and circuit equipment, which are largely housed in buildings, much of the radio plant consists of radio towers, antenna and other equipment outside buildings. Some radio equipment, though, is housed in huts. Consequently, a portion of radio investment may be included in the building factor calculation.

Testimony – AT&T objects to recognizing inflation in plant costs and operating expenses. It recommends eliminating SWBT's inflation factors from the UNE studies. Rebuttal – AT&T incorrectly argues that inflation is already captured in the rate of return included in SWBT's cost studies. While the cost of money is affected by the inflation rate, this does not account for inflation in plant costs and operating expenses. The inflation rate affects investor perception of opportunity costs when capital is invested in SWBT and therefore affects their required rate of return or cost of money. SWBT experiences increases in the costs of materials, labor and other resources which are reflected in the inflation rates used in the UNE cost. Thus, it would be inconsistent to reflect inflation in the cost of money and not reflect inflation in the cost of resources. The inflation factors used in SWBT cost studies are not excessive, and AT&T supplies no data to the contrary.

Testimony – Substantial support asset expenses are double counted in SWBT's labor rates. Rebuttal – The portion of support asset expenses, which are captured through both the support asset expense factors and plant labor rates, is small. Only salary-related support asset expenses are included in both the factor and labor rates. The labor rates are not used for plant repair and company-initiated rearrangement and changes. Thus, none of the support asset expenses should be excluded from labor rates.

Testimony – Commission payments should be included in the premium cost component of labor rates. Rebuttal – Commissions or incentive payments that are not applicable in the wholesale environment should be excluded from the premium cost component of labor rates. Other premium costs should remain (e.g., premium overtime pay, other special payments).

Testimony – Distinct labor rates for overtime and premium time should not be used by SWBT in studies for Time and Material Charges and Maintenance of Service Charges. Rebuttal – Negotiated separate rates charged CLECs for work requiring basic, overtime and premium time must be based on costs which reflect the higher costs of labor during overtime and premium time. Labor rates used to develop time and material charges or maintenance of service charges, when overtime and premium time are not required, should exclude the associated costs. For other activities in which basic, overtime and premium time activities are not distinguished, it is correct to use SWBT's usual labor rates.

Testimony – AT&T criticizes SWBT for including certain computer investments specifically in a few cost studies but including all general computer investment in the support asset expense factor. **Rebuttal** – The Operator Support Systems and Line Information Database computer costs are appropriately included in the cost studies because specific computer resources are required to support these systems which will serve CLECs. All general purpose computer investment appropriately is represented in the support asset expense factor. However, to say that SWBT has double-counted these investments implies a more serious issue. The Oklahoma support asset expense factors reflect a de minimus level of general purpose computer investment. Removing this amount would have a negligible effect on the support asset expense factors.

MR. CONWELL'S REBUTTAL OF OCC STAFF TESTIMONY

Testimony – The OCC Staff contends that SWBT's use of survivor curves overstates UNE costs by adding investment to replace plant retirements. **Rebuttal** – In computing depreciation factors, SWBT uses the Equal Life Group depreciation method, which more effectively matches capital recovery with the depreciation of plant than other methods. In computing levelized capital cost factors, SWBT weighted depreciation and the other capital costs based-on the "time value of money." Depreciation rates in the early years are given greater weight than those occurring beyond the average service life, which raises the depreciation factor, but effectively lowers the cost of money and income tax factors. The use of survivor curves is correct, and SWBT should continue using them to compute capital costs.

Testimony – OCC Staff recommended that computer costs be "zeroed out" from SWBT's non-recurring cost models. **Rebuttal** – This adjustment is not appropriate. Computers support plant and other labor groups involved in CLEC service order processing and UNE provisioning. These activities contribute to computer plant requirements and costs. AT&T witness Segura seems to agree that computer costs are associated with CLEC requests for UNEs.

Testimony – OCC Staff recommends basing the building factor on historical building investment. **Rebuttal** – OCC Staff's rationale for a lower building factor, based on historical investment, is not reasonable. The current and forward-looking mix of switching systems, circuit equipment, and other network equipment require the level of facilities in place today. It is commonly recognized that building costs per square foot have risen over the years. Assuming that construction costs have not changed over the years is unjustified. The recommendation to leave building investment on an embedded basis, when all other plant is required to reflect forward-looking technologies and costs, is arbitrary and intended to produce lower UNE costs and rates rather than to consistently apply the requirements for LRIC cost studies.

MR. CONWELL'S REBUTTAL OF COX OKLAHOMA TELCOM TESTIMONY

Testimony – Cox criticizes SWBT's maintenance and administration (support asset) expense factors for being based on *historical* cost information from a *single year*. It argues that SWBT's maintenance and support asset expense factors are based on operating expenses for the year 1995 and do not recognize "cost reducing trends in labor and capital productivity." **Rebuttal** – At the time of the UNE cost studies (1996), the cost data for 1995 represented the most current

fiscal year information. Recognizing the UNE rates for which costs were being developed would apply to a future period, SWBT adjusted the 1995 "historical" data to reflect average costs over the forward-looking 1996-1998 period by applying a small amount of inflation to the 1995 cost data. Rather than being *out-dated*, the factors reflect *recent* resource costs and productivity in repairing and rearranging plant. SWBT recognizes forward-looking technologies, which over time are expected to have lower operating expenses.

Testimony – SWBT's building factor is more than double what Cox witness Dr. Collins' experience indicates is appropriate. Rebuttal – The building factor reflects the current or forward-looking relationship between building costs and the costs of plant housed in buildings. Dr. Collins must be referring to the relationship of embedded building costs to plant investment, but this factor would not comply with the Commission's definition of LRIC for UNEs.

Testimony – Dr. Collins raises numerous concerns regarding the CAPCOST model SWBT used. Rebuttal – These concerns show that Dr. Collins either has not thoroughly reviewed the model or does not understand its concepts and methods. Nevertheless, this is not an issue because Cox, along with other parties to this proceeding, stipulated to SWBT cost models, including CAPCOST, in their agreement dated 11/26/97.

Testimony – Cox presented its own TELRIC results for an unbundled 8db loop, which were significantly less than the costs of SWBT. In Exhibit FRC-2, Dr. Collins substitutes SWBT's value for annual expense inflation of 2.5% with a revised figure of 1.24%. Rebuttal – This difference is alleged to be due to productivity improvement. However, this difference is not substantiated. In any event, this adjustment for productivity improvement has little impact on UNE costs. The annual cost factors ("ACFs") computed by Dr. Collins and shown in Exhibit FRC-3 of his testimony are incorrect. Specifically, they presume plant service lives which are too long, a cost of money which is too low, and, most importantly, that SWBT will be able to increase UNE prices at the rate of inflation every year. These presumptions result in ACFs that are insufficient to properly compute unbundled loop costs or other UNE costs.

Other parties, including Chickasaw, generally raised the same issues raised by AT&T and Cox.

– Summary of Cross-Examination of W. Craig Conwell

Mr. Conwell filed direct testimony of his own, and was also asked to sponsor the testimony of Mr. Bill Barfield on cost factors and labor rates. He was asked to sponsor Mr. Barfield's testimony on about March 2, 1998; he testified in Oklahoma on March 10, 1998. Mr. Conwell also wrote rebuttal testimony.

Mr. Conwell is an outside consultant. He has never worked as an employee of SWBT, and did not participate in the creation of any of the SWBT cost studies filed in Oklahoma. He did not create any of the inputs, nor did he help anyone at SWBT with the inputs. In particular, Mr. Conwell did not participate in, or assist Mr. Barfield with, the development of the cost factors and labor rates in Oklahoma.

In Mr. Conwell's own direct testimony, he stated that he was in a better position to comment on the cost methods and models than the particular inputs. Mr. Conwell has not run some of SWBT's computer models whose logic he claims is reasonable, including ACES, COSTPROG and LPVST.

In Mr. Conwell's direct testimony, he states that he found SWBT's labor time estimates to be reasonable. In his rebuttal testimony, Mr. Conwell admits that commissions should not apply in the premium time loading calculation of the labor rates. On repeated questioning, Mr. Conwell would not say that the labor rates are reasonable if commissions are included.

In his direct testimony, Mr. Conwell attached a paper entitled "Description of Unbundled Network Element Cost Studies." The word "Oklahoma" does not appear in the actual text of the paper, only the table of contents and appendix. Mr. Conwell admitted that he prepared a prior version of the paper for another SWBT jurisdiction, and was asked to review and update the paper for Oklahoma. The paper was dated August 28, 1997. The paper does not reflect the July, 1997 change in the ACES methodology, and Mr. Conwell admitted he did not know of the change.

Mr. Conwell refused to comment on the propriety of the operator work seconds methodology whereby SWBT proposed to charge AT&T for SWBT's negotiation of operator services contracts with other LECs.

Mr. Conwell's paper states that the maintenance factor cost studies are performed annually using information from SWBT's financial accounting systems, although he admits that the Oklahoma maintenance factor is based on 1995 financial data.

Mr. Conwell admits that to run SWBT's support asset program, it is necessary to have data from all five SWBT states.

With regard to the cost of money stipulation of 10.0% reached by SWBT and AT&T, Mr. Conwell acknowledged that the CAPCOST program would need to be re-run with the 10.0% input. Mr. Conwell admitted that the CAPCOST program would need to be re-run if the OCC determined that the depreciation lives sponsored by SWBT witness Jane Knox were inappropriately long.

- Mr. Conwell conceded that the maintenance factor calculation should be adjusted. SWBT used all of its M-code accounts in computing the maintenance factor, but in response to a RFI, SWBT performed a study that concluded that 37% of the total dollars in the M-code accounts actually reflect SWBT's own non-recurring activity. Accordingly, SWBT was asking CLECs to pay for its own non-recurring activity in application of the maintenance factor as originally computed. This adjustment was not taken into account in the Settlement between SWBT, Cox and Staff.

In his rebuttal testimony, Mr. Conwell admits that certain support asset costs are included in both labor rates and the support asset expense factor. Mr. Conwell further admits that radio equipment that is associated with buildings should be accounted for in the calculation of the building factor. SWBT did not do so. Mr. Conwell concedes that some of SWBT's computer investment are specifically identified in SWBT cost studies as well as accounted for in the

support asset expense factor. None of these adjustments were made prior to the Settlement between SWBT, Cox and Staff.

Mr. Conwell states in his rebuttal testimony that SWBT has used a forward-looking mix of technologies that will result in lower unit costs. Mr. Conwell has read SWBT witness Dale Lehman's testimony that says that the telecommunications industry is a declining cost industry. Yet SWBT does not apply a productivity offset to the inflation factor used in the cost studies.

Mr. Conwell testified that he believed that Telephone Plant Indices (TPI), used by SWBT in the development of its cost factors, are forward looking. Mr. Conwell admitted, however, that TPI is historical cost data. Mr. Conwell stated that the digital switching costs would increase based on SWBT's cost factor calculations using the TPI. Mr. Conwell was unaware, however, of the testimony of AT&T witness Cathy Petzinger which showed that digital switching costs are declining.

Finally, Mr. Conwell admitted that some of the $74,190,912 in Oklahoma salary expense is double-counted in the development of the support asset factor and the labor rates.

11. Barbara A. Smith

In her direct testimony in PUD 97-213, SWBT witness Barbara A. Smith testified that she is Area Manager-Product Cost Development, Analysis and Regulatory for SWBT. In her testimony, she explained the process and proper methodology to use in developing *costs* for UNEs and for interconnection services. She also explained the cost studies which were used as the basis for *pricing* these UNEs.

UNBUNDLED NETWORK ELEMENT AND
INTERCONNECTION SERVICE COST METHODOLOGY

Consistent with OAC 165:55-17-25, SWBT submitted Forward Looking Long Run Incremental Cost studies (referred to as TELRIC by the FCC) as a basis for the prices set in this proceeding. These studies are similar to traditional Long Run Incremental Cost (LRIC) studies SWBT has filed in Oklahoma in the past. The increment used in determining these costs is the entire increment of demand.

Under OAC 165:55-1-4, LRIC is defined as:

> Long run incremental costs (LRIC) means the long run forward looking additional cost caused by providing all volume sensitive and volume insensitive inputs required to provide a service or network element offered as a service, using economically efficient current technology efficiently deployed. LRIC also equals the cost avoided, in the long run, when a service or network element offered as a service is no longer produced. LRIC excludes costs directly and solely attributable to the production of other services or network elements offered as services, and unattributable costs which are incurred in common for all the services supplied by the firm. The long run means a period long enough so that the cost estimates are based on the assumption that all inputs are variable.

A TELRIC study is a type of LRIC study used specifically to develop costs for respective UNEs. TELRIC costs are the foundation for prices set in a competitive market and provide incentives for competitive entry. The Telecommunications Act of 1996 requires that prices for UNEs must be "based on" their respective costs. However, there is an ongoing debate as to whether costs should be speculative or should be limited to those costs actually incurred by SWBT for the network it will unbundle.

SWBT submitted, in Mr. Cooper's testimony for this proceeding, actual embedded cost studies for three major UNEs. These studies can be used as a check for UNE costs developed by the forward looking cost models. For many years, SWBT has submitted LRIC studies in Oklahoma for tariff purposes. The TELRIC study used here is for UNE cost purposes specifically. These cost studies are based upon real network characteristics for Oklahoma.

The process by which SWBT's cost studies have been produced is:

- conceptually sound
- proven and reliable
- logical and understandable
- reflective of the cost of a real world network in terms of fundamental factors, such as location of customers and wire centers, length of subscriber loops, existing routes, and traffic patterns
- based on extensive documentation
- capable of being validated
- capable of easy staff review.

In calculating UNE costs, SWBT analysts answered the question "What would be the forward looking, long run incremental cost for a network element, recognizing SWBT's existing network, and using the most efficient currently available technology and operating practices?"

To develop the cost of a UNE, first SWBT determined the plant investment required to provide a network element. Plant investments were then divided by utilization to project a reasonable amount of filled plant expected for the contract period. Second, capital costs and operating expenses were applied to derive the annual costs.

SWBT used several models, including industry-standard models, to develop its cost studies for this proceeding. Models are necessary to reflect SWBT's current Oklahoma network. Indeed, each model used to develop the cost studies for this proceeding is specific for SWBT's Oklahoma operations.

Forward Looking Common Costs -- SWBT has developed a cost study that identifies forward looking common costs. Common costs are those that can not be attributed to any single element or service. These costs include wholesale marketing and services; network operations; general supervision; and executive, planning, and general administrative expenses. Common costs associated with wholesale functions are appropriate for recovery from UNEs. Retail costs should be excluded from the development of rates assessed to interconnecting carriers. However, common costs by their very nature are not directly assignable to resale

and wholesale functions. Therefore, a ratio was developed to remove the retail portion of the common costs from those applied to UNEs.

Individual Case Basis (ICB) pricing -- ICB pricing is used to calculate the specific cost of providing a service at a specific location or for a specific customer. Certain prices filed in July 1997, as part of this proceeding, were calculated using an ICB. Based on the unique characteristics of the service requested, SWBT network equipment and facility engineers identify the facilities and equipment required to provision the request. After the equipment and facilities investment is determined, annual cost factors (which are the same as non-ICB costs) are applied to develop annual costs and operating expenses. The major factors determining whether a service should be offered on an ICB are very low demand, the wide cost variation among customers who request the service, and the unique characteristics of the element or service requested by the customer.

UNBUNDLED NETWORK ELEMENT COST STUDIES

Ms. Smith's testimony described the following major UNE cost studies:

- The purpose of the local switching cost study is to identify the forward looking, cost-per-minute of use for local switching. Local switching provides the originating switching in the end office. This study includes all the costs for end office switching, except for the ports.

- A UNE port contains line or trunk termination equipment that provides access to the switch. Ports provide basic functionality of SWBT's network switching components. Ms. Smith sponsored several port cost studies to support pricing for this UNE.

- The unbundled common transport study develops the forward looking recurring costs for message traffic (i.e., local and toll calling). Costs are expressed per minute of calling. Common interoffice transport occurs when the local communications traffic of another local service provider (LSP) is combined with that of SWBT onto a local common transmission facility or trunk group.

- SS7 cost studies develop the forward looking recurring and nonrecurring costs associated with providing a STP port, SS7 transport, and services that are provided over the SS7 network architecture. A LSP needs SS7 functionality to perform trunk signaling between central offices to set up calls and establish communication paths.

- Operator services cost studies were conducted to determine pricing for those functions that will be available to LSPs that do not provide their own operator services.

Attached as Exhibit A to Ms. Smith's testimony was a chart summarizing these and other cost studies sponsored by Ms. Smith.

Ms. Smith also adopted the direct testimony of Linda L. Robey previously filed in PUD 97-213. Ms. Robey was Area Manager for Product Cost Development and Analysis for SWBT but has been reassigned to a special project and, as a result, was not available to testify. The testimony Ms. Smith adopted discussed the recurring and nonrecurring costs associated with (1) access to Operational Support Systems (OSS), (2) provisioning unbundled network elements (UNEs), (3) maintenance of service for UNEs and (4) time and material for repair of equipment provided by local service provider or end-users. In particular, this testimony covered the forward-looking, long run incremental cost studies for these elements. The methods employed in conducting these cost studies were previously described in Ms. Smith's testimony.

OPERATIONAL SUPPORT SYSTEMS (OSS) COST STUDY

This study identified the costs associated with providing access to SWBT's OSS for Local Service Providers (LSPs). The costs are specific and exclusive to the installation of the equipment and development of the interfaces that provide this access, as well as ongoing modification and support for this equipment and these interfaces. The various methods of access to OSS were described in detail by Elizabeth Ham in her direct testimony.

Ongoing costs in the OSS study include:

The Remote Access Facility (RAF) was created for use by LSPs as the means needed for their access to OSS. The RAF has two costs: (i) Cost Per Port, which is the cost associated with the investment in physical equipment necessary for LSPs to access SWBT's OSS; and (ii) Ongoing Cost Per Port, which is based on the number of hours required per month to support and maintain the physical ports.

Ongoing Operational Costs include the personnel required to provide software and hardware support and security maintenance for LSPs to access SWBT's OSS.

HelpDesk Costs include the costs to assist LSPs with network connectivity and application access problems or questions. The labor cost associated with staffing the HelpDesk operations comprise the cost per month for this service.

COST STUDY FOR UNE SERVICE ORDERS

This study identified the costs for the manual processing of a service order for unbundled network elements. (Sufficient data do not yet exist to study mechanized service order processing.) Covered by this study are service orders for (1) new service, (2) service disconnect, (3) a service change (a request to add or change a service on an existing UNE) and (4) a record change (a service change request that does not involve central office work, such as a suspend/restore order).

Service order costs for UNEs differ from the service order cost for retail services because the time needed for performance differs. For these studies, Southwestern Bell has identified specific work times and activities required to provide a service order specifically for a UNE. Nevertheless, in these studies, the company uses the same methodology to develop costs for UNEs that it uses to develop retail service order costs. This methodology calculates the time for

each activity involved multiplied by the labor rate of the appropriate employee handling the request.

COST STUDY FOR MAINTENANCE OF SERVICE

This study identified the costs to respond to trouble reports and to isolate and identify the trouble. The charges based on this cost study will apply when the LSP reports a suspected failure of a network element to the SWBT Local Operations Center and SWBT dispatches a technician to make repairs. The charge applies only if the trouble is *not* caused by SWBT's facilities or equipment. This cost study is structured the same as the Maintenance of Service in SWBT's Access Service Tariff F.C.C. No. 73.

COST STUDY FOR TIME AND MATERIAL SERVICE

This study identified costs to repair equipment provided by the LSP or its end user.

Attached as Exhibit B to Ms. Smith's testimony was a chart summarizing these and other cost studies sponsored by Ms. Robey.

In her rebuttal testimony in PUD 97-213 and 97-442, Ms. Smith addressed the direct testimony by AT&T witnesses Petzinger, Klick, Segura and Rhinehart, and she addressed the direct testimony filed by OCC Staff witnesses Hlavac and Krafcik. In her rebuttal testimony, Ms. Smith demonstrated that:

> AT&T's inputs are incorrect and the OCC should determine that SWBT's inputs are correct and reasonable for calculating costs of UNE and interconnection services. AT&T's testimony is inconsistent with its agreement to adopt SWBT's models in this proceeding. Various changes AT&T suggests are changes to modeling itself and not solely input disagreements. OCC Staff inputs are less troubling, but they also incorporate incorrect assumptions regarding UNE cost calculations.
>
> Fundamental difference is AT&T's substitution of "futuristic infrastructure" for existing network that will be unbundled. This difference manifests itself in various assumptions regarding IDLC, dedicated inside plant/dedicated outside plant, OSS fallout and copper fill and other equipment fill. AT&T's approach is incorrect because the 1996 Act requires determining the cost of SWBT network that will be unbundled, not some future proposed network.

I. UNBUNDLED LOCAL SWITCHING

Testimony -- SWBT has misused Switching Cost Information System ("SCIS") model to generate basic switching investments. Rebuttal -- AT&T is incorrect. Consistent with historical use of this model, SWBT used SCIS correctly to generate switching investments used for unbundled local switching study and unbundled port studies.

Testimony -- SWBT did not use correct discount. Recommends a discount used on initial switch pricing only. Rebuttal -- SWBT developed a reasonable method of computing switch discount based on a rating of growth and initial placements

where discounts used have come from signed contracts with its switch vendors. No basis provided for discount AT&T proposes.

Testimony -- SWBT methodology used to calculate future related hardware ("FRH") is not forward looking and majority of FRH is non-traffic sensitive ("NTS"). Rebuttal -- SWBT bases its report on continuing property records which is an inventory of all its equipment and central offices to calculate FRH. Information from this report has been adjusted to make FRH investment forward looking.

Testimony -- Getting started investment ("GSI") does not reflect local switch engineering practices. Rebuttal -- SWBT undertook validation to ensure correctly replicated SWBT Oklahoma digital switches.

Testimony -- Equipment included in GSI is NTS and should be recovered with port charge. Rebuttal -- This is a change to the SCIS model itself, not an input dispute. SWBT included all equipment needed to replicate switch in GSI as traffic sensitive investment. Treating it as traffic sensitive is appropriate because GSI equipment is driven by call processing.

A. SWBT's Switch Discounts Are Appropriate and Correct

Testimony -- AT&T claims that SWBT's discount must be based on initial switch pricing only. Rebuttal -- SCIS is programmed to use switch discounts as an input to model expressed as a percentage. The switch discount (system and volume) is the effective discount off the vendor's list price. Discount is based on 1997 (extended into 1998) signed agreements with specific switch vendors. Used signed vendor contracts for DMS100 and 5ESS switches to determine appropriate discounts for both initial placement of switch and additional growth jobs. OCC Staff (Hlavac) supports. Weighting these 2 types of discounts computed using 5.1% access line growth over a 9-year growth period based upon publicly reported historic experience. This approach is appropriate, as SWBT witness Deere discusses in his rebuttal testimony, because switches are purchased to meet initial demand and then grown at regular intervals (e.g., 2 year periods).

Testimony -- AT&T proposes discount methodology based on initial jobs only (no actual discount percentage proposed) and treats all investment as initial. Results in a lower discount. Rebuttal -- SCIS develops investment for existing demand which consists of switches in different life cycle stages. This approach accurately characterizes SWBT's network. Growth jobs for additional lines are then placed on average every 2 years until switch is replaced. Cannot physically "flash cut" and replace entire network, which is practical effect of what AT&T proposes by only using discounts received on initial switch replacement. Under AT&T's approach, SWBT would be required to base its cost as if all switches were being bid out at the same time. OCC Staff witness Hlavac agrees with SWBT.

Testimony -- OCC Staff (Hlavac) recommends increasing initial investment by adding in cost of first growth job at year 2. He expresses concerns with access line growth percentage used. Rebuttal -- Increasing initial investment will decrease switch fill factor, thereby increasing each element's overall cost. Switch vendors negotiate discounts based on number of initial lines and growth lines. Any shifting of growth lines to initial placement could affect discounts.

Testimony -- OCC Staff (Hlavac) recommends removing growth investment placed in year 9 because it would not be needed in last year of switch life. Rebuttal -- Growth lines still must be added in last year of life in order to meet demand for that year.

Testimony -- OCC Staff recommends using average of line growth for Oklahoma only. Rebuttal -- Access line growth used in discount calculation by SWBT was based upon access line growth for its 5-state area. This is appropriate because discounts are negotiated as system-wide discounts and not state-specific.

Testimony -- AT&T claims that merger with Pacific Bell should result in higher discounts than those currently used in local switching studies. OCC Staff concurs and recommends a 1% increase in initial discount and 3% increase in growth discount. Rebuttal -- Combining volumes of these 2 companies does not represent new revenues to switch manufacturers because both companies already have switch contracts with same vendors. No further discounts will be provided.

B. Minutes of Use in Local Switching Study

Testimony -- OCC Staff claims that SWBT should use a forward looking assumption for minutes of use ("MOU"). This revised assumption would result in increasing MOU by 11.2%. Rebuttal -- SWBT's assumption based on total local, toll and access MOU measured for 1996. These MOU reflect usage for switches in Oklahoma, some of which are new and some of which have been in service for a particular time and have had growth added. SCIS model switches based on current demand for each switch. This ensures that SCIS investment matches MOU. OCC Staff proposal is incorrect. If MOU are increased, there must be a corresponding increase in investment other than the processor to handle the additional MOU on the switch. Additional investment has not been included in unbundled local switching study.

C. Feature Related Hardware Methodology

Testimony -- AT&T criticizes SWBT's FRH methodology because it violates forward looking principle of a LRIC cost study. Dividing investment by forward looking total switch development invalidates the analysis. AT&T complains that SWBT should have used SCIS model to develop FRH cost. Rebuttal -- FRH includes hardware components needed to provide features (e.g., 3 port conference circuits needed to provide 3-way calling) which is not part of SCIS model office. Because FRH is part of total switch investment and not included within SCIS model office, costs were calculated outside that model. SWBT then added FRH to total switching investment. In addition, SWBT used its continuing property records ("CPR"), which is a system that keeps a record of physical inventory for each central office and includes prices paid for each price of equipment in that office as required under FCC rules. This hardware will be provisioned as part of the unbundled switching element. (SWBT found slight duplication of investments in FRH also included in SCIS but this equates to a less than 1% change in total local switching investment.) AT&T testimony incorrect because CPR data only use a starting point to develop FRH investment components, not the actual dollar amounts. A Current Cost/Book Cost Ratio then was applied to the FRH investment to convert it to current investment prices used in TELRIC. Current FRH investment then was divided by current total switch investment from SCIS. This is consistent with LRIC cost studies as substantiated in SWBT witness Dr.

Lehman's rebuttal testimony. Based upon this analysis, switch prices were not declining in the manner AT&T suggests.

Testimony -- AT&T used a FRH factor separately for traffic sensitive and NTS equipment. AT&T argues that some of the FRH is NTS and should not be recovered in local switching MOU charge. Rebuttal -- Issue is not an "input" disagreement. SWBT model platform already distinguishes between traffic sensitive and NTS. AT&T's change is a change in the model itself. As Mr. Deere says in his rebuttal testimony, local switching charge includes all switch feature capability, so it is consistent to have all FRH included as part of the local switching cost. Moreover, AT&T and SWBT agreed to use SWBT's cost methodology in this proceeding so this issue should no longer be subject to disputes as part of the model platform itself.

D. Getting Started Investment

Testimony -- AT&T states that SCIS comes already loaded with spares and the amount of spares in SWBT's SCIS runs should be reduced to account for their centralized warehousing. Accordingly, AT&T made an arbitrary 50% reduction to reduce the spares in each office. OCC Staff (Hlavac) recommends 25% reduction in spares instead of 50% reduction. Rebuttal -- The SCIS model office GSI is composed of 2 main categories of equipment: (i) central processor and related equipment; and (ii) various equipment to get switch operational. SCIS computes GSI for each switch, and this computation includes the initial investment for central processor and related equipment, maintenance and test equipment, spare components, etc. This is a model platform issue and not an input issue. Thus, raising it is contrary to the AT&T/SWBT agreement. Validation reviews have confirmed that amount of spares within SCIS is comparable to actual spares inventory in Oklahoma central offices. No factual basis for 50% reduction by AT&T or 25% reduction by OCC Staff.

Testimony -- AT&T claims it is inappropriate to include GSI and MOU costs. Rebuttal -- SCIS developed to ensure that investment of every switch service is fully identified and attributed to its users. This includes determining the investment associated with every "limiting resource" of the switch (e.g., lines, trunks, call capacity, memory). GSI attributed to "limiting resource" that would cause switch to exhaust. These activities ultimately limit its capacity. Classification of equipment as traffic sensitive or NTS should not determine its inclusion or exclusion from GSI. Rather, it should be driven by cost causation because, as more usage occurs, more processor capacity is utilized. AT&T view that processor investment is NTS violates cost causality. This same reasoning applies to other components of GSI, such as maintenance and test equipment. If the GSI components were considered volume insensitive, as AT&T suggests, they would become shared investments of the switch which then would be pushed down to the element level (unbundled local switching element). AT&T approach would result in no effective difference.

II. SWITCH PORT STUDIES

Testimony -- AT&T allocates GSI to the ports. It claims that GSI should be treated as NTS. Rebuttal -- GSI is included in MOU cost because it is investment that must be replicated to replace the switch. Characterizing it as traffic sensitive or NTS is irrelevant as to what is included in port cost study.

A port cost only should contain cost of terminating the line or trunk. All other components are part of local switching costs (including all usage and features). Even if AT&T were correct, cost would not be associated with the port but with the line itself. SWBT has a different purchasing method for ISDN, known as functional pricing. This pricing means that there is a stated price per line in the ISDN contract. There is no discount per se. SCIS only will accept a discount and not a price per line, so ISDN discount had to be derived based on functional price of the line for use in SCIS.

III. UNBUNDLED TANDEM SWITCHING COST STUDY

Testimony -- AT&T recommends applying switch discount developed in its testimony to unbundled tandem switching study. Rebuttal -- AT&T's approach is wrong. SWBT discounts applied within SCIS for tandem switching are the same discounts used for unbundled local switching.

Testimony -- OCC Staff recommends keeping GSI in MOU and allocating all GSI to the port. Rebuttal -- If GSI for tandems is allocated to the port, there is no tandem trunk port rate element to include the cost of the GSI for the tandems. Incorrect to allocate cost of tandems GSI to analog port line because it presents a unique problem of how to recover this cost. Tandem GSI is correctly identified now as part of the tandem MOU cost.

IV. SS7 SIGNALING STUDIES

Testimony -- AT&T witness Klick recommends changing link utilization for the Signal Transfer Point ("STP") to 40%. He also claims that SWBT conceded redundancy of STP is unnecessary in forward-looking environment. OCC Staff (Hlavac) also recommended a 40% STP utilization factor. Rebuttal -- Mr. Klick incorrectly changed utilization to reflect maximum of STP link utilization. SWBT used actual utilization of STP link in its study because it reflects the TELRIC requirement that costs of each element must be attributed to greatest extent. Spare capacity of link is attributable to that link, so its cost must be included in the cost of the link. Mr. Hlavac's recommendation appears to be based upon SWBT's response to a data request when it stated that maximum STP link utilization is 40% which is different than the optimal utilization at issue herein. Largest impact on utilization is FCC Order requiring placement of a pair of STPs in every LATA (instead of only in major metropolitan areas) to satisfy IXC interconnection requirements. Also, major goal of SS7 network is reliability. Excessive utilization means that SWBT will have unacceptable service requirements. High utilization must be balanced by necessity of getting all calls efficiently through the network. This balance in utilization was used in SWBT's studies. Redundancy is not an issue and was not discussed in my deposition testimony.

Testimony -- Mr. Klick states that SWBT used the medium size STP configuration instead of using a more economical large STP configuration. Rebuttal -- Mr. Klick incorrectly assumed SWBT, as it did do in other states, used the medium configuration instead of the large STP configuration. This is not the case. The SS7 studies provided to AT&T clearly show SWBT used the large STP configuration. (See CCSCIS STP Total Investment Report run dated 1-23-97, filed 7-14-97).

Testimony -- Mr. Klick states that the SCP used in SWBT's studies is outdated technology, violating LRIC principles. Rebuttal -- The SCP used in SWBT's study is not outdated technology. There is no current replacement for the existing SCP, which is manufactured by Digital Equipment Corporation ("DEC"). SWBT's SCP investment was based on DEC's list prices from 1995. A discount from the vendor contract then was applied to this price list. The next generation is called the Network Database which is not available for purchase today and is not part of SWBT's network.

Testimony -- Mr. Klick developed a discount to apply to the SCP equipment prices. This discount is based on a trending of SCP discounts from a historical period. Rebuttal -- Mr. Klick improperly extrapolated his discount based on the decline in DEC's SCP prices from 1992 to 1995. There is no evidence to prove that future discounts are indicative of discounts from this period of time.

V. OPERATOR SERVICES AND DIRECTORY ASSISTANCE

Testimony -- Mr. Klick recommends modifying the discount applied to the DMS100 switch prices for the operator services and DA studies. Rebuttal -- These recommendations are inappropriate because of the reasons stated above in response to AT&T's recommendation regarding switch discounts. SWBT's discounts are correct.

Testimony -- AT&T recommends revising the fill factors used in the operator services model to reflect maximum utilization. Rebuttal -- The fill factors used in SWBT's studies are based on the actual expected utilization of each piece of equipment consistent with applicable TELRIC costing requirements.

Testimony -- Mr. Klick characterizes fill factors in the operator services equipment as lower than should be expected. Rebuttal -- Three reasons contribute to the utilization level: (1) Service Control Unit ("SCU") only can be bought in a specific size, which will increase the spare capacity in cases where the SCU capacity does not meet call demand; (2) SCUs also are required for maintenance, which compounds the problem in areas where there is low utilization; (3) redundancy of SCUs is needed to meet service requirements and this must be balanced with the cost of spare capacity in the equipment. Furthermore, SCUs are deployed in pairs, like the STPs (as Mr. Deere discusses) so the maximum utilization for each SCU would be 35%.

Testimony -- Mr. Klick states that "an efficient provider of basic local exchange service would not install significant excess computer capacity up front, in anticipation of growth because expansion of computer capacity can occur as needed simply by adding cards or microchips." Rebuttal -- Mr. Klick incorrectly assumes this equipment is similar to computer equipment. This equipment only can be purchased in specific sizes and cannot be upgraded with cards or microchips.

Testimony -- Mr. Klick claims that application of a fill factor to operator services equipment is fundamentally flawed. Rebuttal -- Mr. Klick has confused the application of the fill factor to identify the spare capacity with the legitimate need to provide the equipment, even though the size of the equipment exceeds current demand. SWBT's application of the fill factor, based on current utilization, and its subsequent application to current investment, is the correct

method to identify spare capacity of the equipment and attribute it to the appropriate element.

Testimony -- AT&T excluded expenses associated with operator services methods/ training, operator services marketing, operator services facilities personnel activities and exchange carrier relations activities. It also removed all these operator expenses from the common cost allocator, which leaves them on the floor, (i.e. not included in any study). OCC Staff (Krafcik) recommends removing marketing expenses associated with operator services. Rebuttal -- It is incorrect to remove these expenses because they are all considered shared expenses of providing operator services (including implementation costs for providing these types of services to the CLECs). Removal of these items violates the TELRIC methodology principle which allows for shared expenses to be identified and pushed down to the element level.

Testimony -- OCC Staff questions the inclusion of the GHQ and the Oklahoma nonrecurring costs for the Branding Cost Study. Rebuttal -- Mr. Krafcik's questions are unjustified. The expenses included in the study represent the costs of implementing the service and training of operators within Oklahoma.

VI. OPERATIONS SUPPORT SYSTEMS AND MISCELLANEOUS STUDIES

Testimony -- AT&T removed the majority of equipment from the OSS study. Rebuttal -- Mr. Klick removed the equipment items in the study because they are part of the computer investment included in the support assets factor. The computer investment is correctly caused by and associated with the study. Mr. Hlavac appears to agree, since he recommends an adjustment to the support assets factor.

Testimony -- Mr. Klick proposed changes to the LIBD SMS cost study. He claimed that there is double counting because the computer investments in this study are included in the support assets factor. Rebuttal -- If the computer investment is removed from the support assets factor, the result would be de minimus. It is incorrect to remove this investment from the study.

Testimony (PUD-442 only) -- Mr. Klick proposes a change in the E911 switching investment. This change involves applying AT&T's switch discounts. Rebuttal -- There is no basis for the change as discussed above with respect to AT&T's proposed switch discounts. As SWBT witness Huelsing discusses in his testimony, there is a basis for the nonrecurring charges. The purpose of these charges is to recover the costs associated with providing E911.

Testimony (PUD-442 only) -- Mr. Klick recommends removing the management fee, eliminating the geographic zones for some of the costs, and eliminating the Commission Assessment (actually Other Taxes in Oklahoma) for the White Pages study. Rebuttal -- The management fee paid to Yellow Pages is a legitimate cost of the service and thus should be included in the cost of providing White Pages. The Other Taxes is assessed upon revenue. Since providing CLECs this service will generate revenues, the Other Taxes factor should apply.

Testimony (PUD-442 only) -- Mr. Klick proposes a small upfront Directory Listings charge. Each party should incur its own costs for providing daily updates for Directory Listings. Rebuttal -- Mr. Klick states that the upfront

cost should require very little labor effort or computer time. SWBT has identified the appropriate costs for this service.

VII. NONRECURRING COST STUDIES

Testimony -- AT&T proposes nonrecurring costs in this proceeding which have different assumptions than SWBT nonrecurring cost studies regarding times for activities, forward looking operations support systems used, flow through and treatment of loops as POTs loops (not designed loops). Rebuttal -- AT&T has recalculated SWBT's nonrecurring costs based on the assumptions in Mr. Segura's testimony. AT&T's assumptions are based on the following fallacies:

Definition of Forward Looking Efficient Operations Support Systems -- AT&T contends that SWBT's systems and practices are not forward looking. To the contrary, SWBT has based its nonrecurring costs on OSS and processes it expects to use for providing service to CLECs. In most cases, it is the same process used to provide service to SWBT retail customers.

Time Estimates -- AT&T generally disagrees with the time estimates for the nonrecurring studies, but its witness, Mr. Segura, acknowledges that material "default" values, not Oklahoma data, are used. Thus, it is not surprising that AT&T's time estimates represent unrealistically low expectations of the time needed for activities to provide UNEs in Oklahoma.

Manual versus electronic process for preordering and ordering -- AT&T assumes a 98% flow through for all ordering, preordering. It extends this flow through value to all the back office legacy systems down stream from the ordering process. The 99% (referenced in Segura's testimony) flow through is only achieved with SWBT's EASE system which was developed based on existing flow through experienced by its trained, experienced service representatives. AT&T's use of this flow through number for nonrecurring costs is inappropriate because many of the processes do not flow through under any circumstances. Moreover, the processes that have some flow through would not be as high as 98%.

Loops as designed circuits -- AT&T contends that all POTS loops (i.e., 2 wire nondesigned loops) should be treated as "non designed." SWBT's process for provisioning a loop as a UNE requires that it be treated as a "designed" service.

Testimony -- AT&T and OCC Staff apply a 2% fallout (98% flow through) to all nonrecurring cost studies. Rebuttal -- AT&T agrees that all SWBT retail services or UNEs do not flow through at 98%. AT&T witness Segura stated that it only applied to "POTS" service (a 2-wire residence service). Segura clearly distinguishes between POTS and designed services, which he said would have a higher fallout rate. The 2% fallout percentage for use in any study is inappropriate. AT&T should not have applied the 2% fallout to the following Oklahoma cost studies: Unbundled Network Element Manual Service Order - Complex; BRI Port Features Nonrecurring Cost Study; Unbundled Voice Grade Interoffice